# Eliminating traditional reference services in an academic health sciences library: a case study

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**Question:** How were traditional librarian reference desk services successfully eliminated at one health sciences library?

**Setting:** The analysis was done at an academic health sciences library at a major research university.

**Method:** A gap analysis was performed, evaluating changes in the first eleven months through analysis of reference transaction and instructional session data.

**Main Results:** Substantial increases were seen in the overall number of specialized reference transactions and those conducted by librarians lasting more than thirty minutes. The number of reference transactions overall increased after implementing the new model. Several new small-scale instructional initiatives began, though perhaps not directly related to the new model.

**Conclusion:** Traditional reference desk services were eliminated at one academic health sciences library without negative impact on reference and instructional statistics. Eliminating ties to the confines of the physical library due to staffing reference desk hours removed one significant barrier to a more proactive liaison program.

## INTRODUCTION

The future of reference services in libraries has been the topic of discussion for many years. As long as twenty-five years ago, Ford proposed that reference desks be eliminated and services that librarians provide be reconsidered [1]. A series of articles published in 2003 addressed the future of reference in an ever-changing information landscape. Several of the future scenarios envisioned personalized service to customers by learning more about their unique information needs and perspectives [2–5]. These studies also recognized that reference questions were becoming more complex, requiring librarians to spend more time to address them. In addition, the studies posed the need for librarians to go to the user since information technology had made it unnecessary for the user to go to the library. Kronenfeld noted this same trend of ''out of the library'' activities that were providing new opportunities for curricular and instructional roles [6]. In response to changing user needs, many libraries have eliminated their reference desks in the last decade to consolidate service at one main desk [6–11]. How these desks are staffed varies from librarians and staff working together to librarians being on call in their offices. Some libraries have reported this latter practice has freed librarians to do other work during their on-call times [9, 10, 12].

Single service desks have also been appearing in the academic health sciences library community. The Tompkins-McCaw Library for the Health Sciences at Virginia Commonwealth University gradually moved to fewer and fewer librarian hours at a single desk over several years, realizing that librarians needed to be freed from service desk hours to provide consultations and instruction outside the library. The library noted challenges in this staffing shift and reported that it continues to evolve [12]. The Duke University Medical Center Library addressed changing user needs and demands by moving to a single desk and experimenting with new staffing models from 2000 to 2008, including placing librarians on call [7]. Allegri and Bedard described service point consolidations with staffing changes at health sciences libraries at Texas A&M University and the University of North Carolina–Chapel Hill. Several lessons learned were noted, including the need for staff to readily recognize when referrals to librarians were appropriate [13]. All of these libraries noted the need for ongoing training of frontline service staff at single service desks.

As the need for in-depth and personalized services to customers has grown, librarians have seen an opportunity to embed themselves in colleges and departments, either as liaisons or informationists [9, 14–16]. While these roles have effectively utilized librarians' knowledge and supported them as partners in education, research, and patient care, they have also demanded significant amounts of time to develop and implement. These demands have been in direct competition with time spent staffing a desk or providing on-call reference service. Despite this evolution of roles, models requiring librarians to be on-call typically require the librarian to be physically present in the library and to stop tasks abruptly. Economic strains have forced many libraries to work at suboptimal staffing levels, placing greater demands on staff who are there and often tying them to the confines of the library.

In the fall of 2009, the Prior Health Sciences Library (PHSL) at The Ohio State University (OSU) moved to a new model of providing reference service, dubbed the Personalized Information Consult Service (PICS). The PICS model differs from most other libraries in that librarians neither staff the service desk nor provide walk-in reference services. The PICS model provides in-depth reference service primarily by appointment, with a few weekly office hours provided by librarians at their convenience, within the framework of a formal liaison librarian model. PHSL service desk staff provide frontline basic reference assistance (as defined for PHSL) and refer complex questions to librarians using their liaison colleges as a guide. This new model essentially eliminated traditional reference service.

This case study describes the steps undertaken to achieve this paradigm shift and the details of the model and examines early data to evaluate the impact of the new model. Though some other major libraries have made similar changes to their reference models [9, 12, 13], ''eliminating reference'' is not well studied at this point. This case study will be of interest to libraries considering such a change and provides a discussion of the choices made and issues considered.

## BACKGROUND

PHSL is an academic health sciences library that serves 5 colleges (medicine and allied medicine professions, nursing, public health, dentistry, and optometry) that have approximately 9,200 full-time equivalent (FTE) faculty, staff, and students. PHSL serves the OSU Medical Center, including OSU University Hospitals and the James Cancer Hospital. The library is currently administered independently under the office of health sciences but maintains ties to the larger Ohio State University Libraries (OSUL) system through collections, through committee service, and as a tenure-initiating unit.

In the last fifteen years, gradual changes to public services occurred at PHSL, including a team-based management plan for reference services [17] and consolidation of reference and circulation desks into the assistance, service, knowledge (ASK) desk in 2004 [18]. A small desk with a computer workstation remains within the bounds of the ASK desk to provide a place for consultation. Librarians historically provided scheduled reference hours each week but had not staffed the ASK desk (i.e., performed service desk functions other than reference service) since its inception. For many years, librarians were physically present during their entire reference shifts but moved to an in-office, on-call system in 2008. Reference desk hours were gradually decreased to three hours per weekday in 2008 in response to decreasing demands for specialized reference. Weaning reference desk hours made sense but created or preserved a few problems. Customers needing in-depth consultations with a librarian were asked to return during reference desk hours. No formal referral system was in place to address customers who could not return during those hours. Also, staffing the reference desk remained challenging. PHSL had only six professional librarians staffing the reference desk in 2008. Because other librarians' positions demanded spending most of their time on non-reference activities, the instruction librarian and the education and reference services coordinator (ERSC) staffed the majority of reference desk hours and continued to be confined to the library.

PHSL librarians (not including administration) had been organized by functional domain consisting of the ERSC, an instruction librarian, a research librarian (who provides support for comprehensive literature searching), an emerging technologies librarian, a head of copyright management, a collection development librarian, and curators of historical medical collections. In 2008, four librarians began a limited pilot liaison system with the colleges of dentistry, optometry, nursing, and medicine. The pilot was a starting point to test demand for such services and was launched quietly because librarians had other primary responsibilities. During the pilot, librarians served as a point of contact for a college and could proactively reach out to colleges. However, liaisons' expectations were limited, and most instructional sessions were still taught by the instruction librarian. Reference desk hours were still scheduled as usual, and customers were referred to the desk for reference assistance, not to liaison librarians. The pilot lasted from mid 2008 through most of 2009 and was met with limited success. There were no formal measures of success built into the pilot; however, qualitatively, librarians felt liaison work held potential if they had more time to devote to it.

In spring 2009, public services librarians participated in abbreviated strategic planning and agreed that a formal liaison program was needed to provide customized, in-depth consultations targeting specific populations. They also agreed that given a well-trained ASK desk staff, traditional reference desk hours could be eliminated without negatively impacting service available to walk-in customers, while also providing additional time to develop new services. The strategic planning process coincided with the appointment of a new library director, who agreed that a new model should be investigated.

## GAP ANALYSIS

After initial strategic planning discussions, the ERSC and the manager of the ASK desk met to identify gaps that would need to be addressed prior to any shift in service models. Gap analysis involves comparing the current state with the desired future state and determining whether filling the gap is feasible, what current activities should be stopped, and what new activities should begin [19]. PHSL's current state was a traditional model of reference and a fledgling liaison system, both limited in scale. The future desired state was that of a more embedded liaison system with flexibility of time and location to serve the needs of individual colleges within the reality of no new faculty librarian positions. The group concluded that the answer to the question of what current activity should stop to bridge the gap between current and desired states was to discontinue walk-in reference desk hours. The gap analysis also allowed close examination of what tasks related to readying staff and librarians would be needed to move to the proposed model. The details of the gap analysis are given in Table 1.

The gap analysis was likely the most critical step of the planning process for various reasons. First, it provided an implementation map that broke down the process into concrete steps. Second, it provided a written record of issues needing immediate and

**Table 1**
Gap analysis for moving to nontraditional reference/liaison service model

| Gap | Feasible steps to fill gap | Time frame for completion |
|---|---|---|
| **Liaison model gaps** | | |
| Liaison model not fully developed | Define liaison service for library with typical and expected activities for liaisons; must decide between passive or proactive model | 4 months |
| No subject specialists | Create list of subject specialists based on prior experience and/or requests | 4 months |
| Current job duties of public services librarians not well understood by service desk staff | Create fact sheets for each librarian; store in circulation handbook; conduct training session with service desk staff | 1–2 months |
| **Reference service model gaps** | | |
| New reference model not fully developed | Create service flow chart to provide visual guide to new model; conduct training with service desk staff | 4 months |
| Expectations of service desk in new model not defined; no working definitions of basic and specialist reference service | Define functional definitions of basic and specialist reference transactions to serve as boundaries for service expectations | 4 months |
| System of referring customers not developed | Create suggested script for referring customers | 5 months |
| | Provide training on how to efficiently and effectively refer customers | 5 months |
| | Stock business card holder with appropriate business cards for referrals | 1 month |
| **Staff training gaps** | | |
| No organized, ongoing in-house training program | Create ongoing training program | 2 months |
| | Conduct training sessions when most service desk staff are available; provide handouts, presentations, one-on-one training, etc., to those who cannot attend | 2 months; ongoing |
| Lack of up-to-date information for staff to refer to when librarians not available | Provide training materials in multiple formats (PDFs, online subject guides, in-person database searching training, online tutorials) | 1 month; ongoing |
| | Update current knowledge bank of facts (How do I…?) | 6–12 months |
| | Investigate ownership of website materials and required periodic maintenance of information contained within | 6–12 months |
| Some staff uncomfortable with level of expected basic reference service in new model | Provide training on reference interview technique | 2 months |
| | Continue covering issues in ongoing training program | 2 months; ongoing |
| | Service desk manager and education/reference services coordinator routinely cover issues in ongoing training | 2 months; ongoing |

ongoing attention in the months that followed. Third, the gap analysis highlighted activities that should be developed whether or not the service model was changed. These could be addressed almost immediately (within one to two months) before all details of the new model were completed and included creating an ongoing training program for service desk staff that included learning about specific librarian duties, reference interview techniques, and database searching.

After identifying the gaps and proposed solutions, volunteers took on specific tasks related to gaps and set deadlines for completion. Following completion of immediate tasks, other gaps were filled within the next four to five months. After most gaps had been addressed, the formal proposal for the new service model was presented to the library's executive leadership for approval. The new model was phased in, first with liaison services in November 2009, followed by the elimination of reference desk hours at the end of the fall quarter 2009.

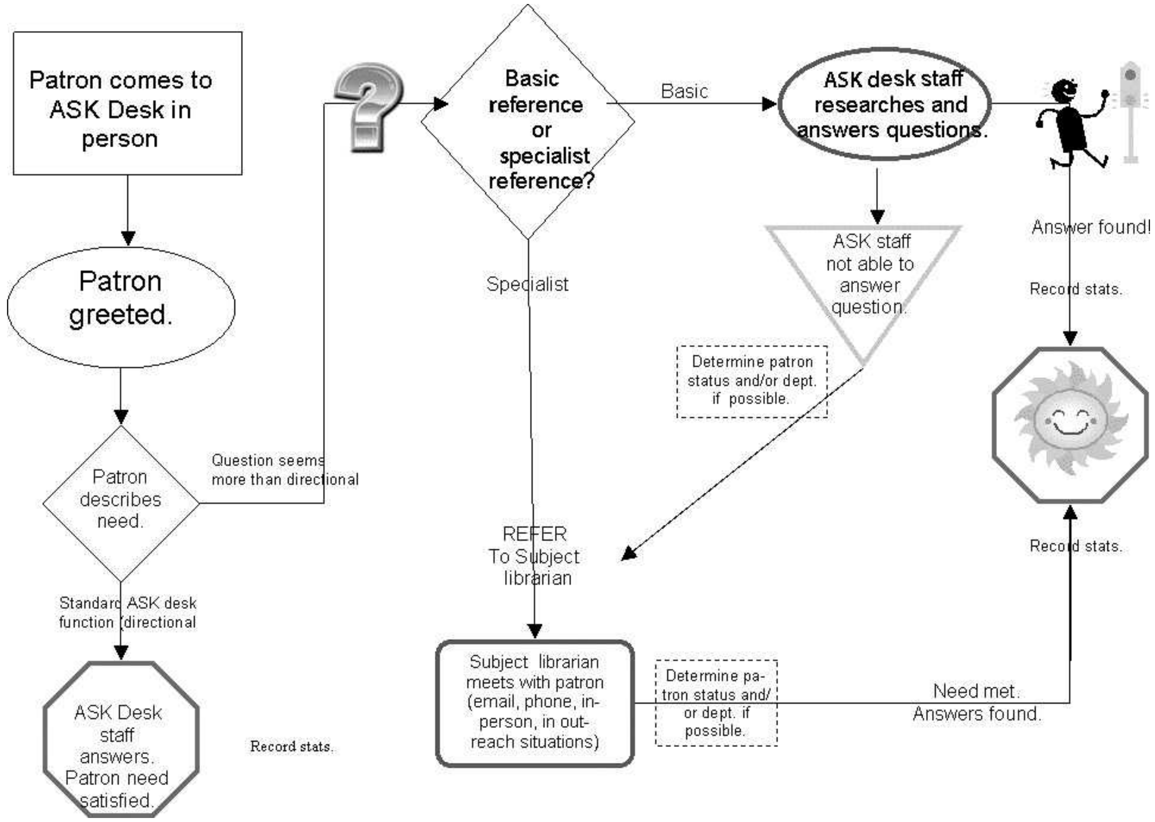
## ANALYSIS OF LIAISON AND REFERENCE SERVICE MODELS

### Liaison librarian models

When determining what type of liaison and reference service model would be right for PHSL, the main issue was whether to remain a domain-driven team of librarians utilizing a passive style of liaison service, as during the pilot phase, or to institute a more proactive model. The more passive liaison model would have formalized assignments of librarians to colleges, making them the point of contact for librarian and library services. Customers would be referred to librarians as needed. Liaisons would be expected to communicate with the college periodically, letting them know who they were and what basic services they could provide. However, the instruction librarian and/or the ERSC would still handle most teaching duties. This system would provide a hybrid between domain-based librarian services and the liaison world. The benefits of such a system were that it provided a simplified method of contact for a college in a large institution, did not dramatically impact the workload for librarians, and allowed implementation of a liaison program without a large number of liaison librarians. The disadvantages of this system were that it placed the burden of instruction, reference, and marketing on too few librarians who were not devoted to those subject areas and who had their own liaison responsibilities. Additionally, this model did not provide ample opportunity for librarians to develop teaching skills useful to their specific liaison college.

Because the group's vision was that of embedded librarians in respective colleges who could develop

**Figure 1**
Reference transaction flowchart


Patron comes to ASK Desk in person
Patron greeted.
Patron describes need.
Question seems more than directional
Standard ASK desk function (directional
ASK Desk staff answers. Patron need satisfied.
Record stats.
Basic reference or specialist reference?
Basic
Specialist
REFER To Subject librarian
Subject librarian meets with patron (email, phone, in-person, in out-reach situations)
Determine patron status and/or dept. if possible.
Need met. Answers found.
ASK desk staff researches and answers questions.
ASK staff not able to answer question.
Determine patron status and/or dept. if possible.
Answer found!
Record stats.
Record stats.

relationships leading to meaningful partnerships, a traditional model of liaison service was selected. Librarians were assigned to a college or group and were expected to conduct teaching (in any format), consultation, marketing, and communication with the colleges. Because most liaisons had other primary duties, they were given freedom to choose how proactive they would be.

## The new model of reference service

The PICS model provides basic reference assistance at all hours that the library is open through ASK desk staff and provides specialized assistance from librarians on an appointment or office hours basis. Because liaison librarians are officially assigned to colleges, the ASK desk staff can refer customers to the appropriate librarian as needed. Liaisons are responsible for instruction and reference requests that come from their assigned colleges. Unlike the Reference and User Services Association's guidelines for liaison work [20], PHSL librarians generally do not do collection development work. They are expected to familiarize themselves with appropriate collections that are important to their liaison areas and act as conduits for suggestions, as needed.

PICS is grounded in both customer-oriented goals and librarian-oriented goals. The service was planned to provide personalized, specialized reference and instruction services when and where they are needed, in the context of information needs, while increasing awareness and use of available resources to target customers through proactive liaison marketing. The benefits for librarians include flexibility and time for substantive projects, better utilization of expertise, and enhanced opportunities for the requirements of tenure and promotion (teaching, research, and service).

The reference service flowchart (Figure 1) details how questions from customers who walk into the library will be handled in the absence of traditional reference desk service. The new model places the burden of handling walk-in customers on ASK desk staff. The flowchart provides working boundaries to ASK desk staff, defining how far they should take interactions with customers before referring them to a librarian. This was done both to ensure customers were appropriately referred and to give structure and assurance to ASK desk staff that librarians did not expect them to do all the work. The ASK desk had been and continues to be staffed by a combination of five full-time paraprofessional staff, three staff from other departments who collectively provide twenty hours of weekly desk coverage, one ASK desk manager, and seven to nine undergraduate students. This small group keeps the library open ninety-seven hours per week. The ASK desk functions are described in other articles [8, 18] and include circulation desk functions, referral to a host of other entities in the library building, electronic reserves processing, and document delivery assistance. To develop a feasible model under these circumstances, working definitions of basic and specialist reference were devised, with the intention that basic questions could be regularly handled by ASK desk staff, while specialized questions would almost always be referred to the appropriate librarian. The definitions also incorporated student expectations.

To begin writing definitions that provided functional boundaries, the PHSL staff used the Reference and User Services Association's definition for a reference transaction [21], which aligns with that used by the Association of Academic Health Sciences Libraries [22]. OSUL had already written definitions for basic and specialized reference for tracking statistics. Because ASK desk staff already often answered questions that crossed into the specialist realm as defined by OSUL, it was necessary to establish basic and specialist reference definitions for PHSL, specifically. Basic reference was defined as questions that required the knowledge and basic use, and possibly initial recommendation, of typical resources in the health sciences library. These include OhioLink (a statewide consortium), the library catalog, PubMed, Cochrane databases, CINAHL, electronic books, off-campus sign in, and full-text retrieval of known journal articles. Specialist reference was defined to include basic reference plus the recommendation of sources, interpretation of results, in-depth assistance with search strategy development, mediated searching, and assistance with using reference management software. Students are expected to accurately point customers to resources on the library's web page, provide basic OhioLink information, and use common tools. Though not unlike duties of comparable service desks, the tasks required of ASK desk staff are extensive and created the need for ongoing training.

## TRAINING ISSUES

The PICS model increased the level of reference service expected from ASK desk staff, and some staff were more comfortable than others with providing this level of service. ASK desk positions have not historically required a high level of database expertise, though several staff members have master's degrees in library science and others have significant on-the-job experience. To address this gap, training via monthly departmental meetings began in fall 2009. A refresher training session on reference interview techniques was conducted for all public services staff, followed by in-depth database instruction. Training to aid in referring customers to librarians, including suggested language, was conducted. The suggested language was not prescriptive but rather gave guidance to positively frame the new service. Because some initial fear existed about not immediately helping customers, the suggested message was that the customer is important and can be helped with certain things right away. However, in-depth assistance would likely require an appointment with a librarian who would devote full attention to the need during that time. Recently, more formal training of students who work at the ASK desk began, introducing the model, ways to communicate the model to customers, and basic search techniques. Students are required to complete an assignment following the session.

## MARKETING OF THE NEW MODEL

Liaisons were given the freedom to communicate the new model to their assigned colleges in the form and wording of their choice. Most chose to send an email to either an email list or college dean. Some attended meetings with a college's faculty or deans. In the library itself, a promotional slide was created as part of a slide show that runs continually on flat panel monitors in the library. Marketing the liaison program is one current weakness of the model, and some of this has been due to uncertain organizational issues as well as competing job responsibilities. A more robust and unified marketing program is a natural next step as the new model is further solidified.

## EVALUATION OF PERSONALIZED INFORMATION CONSULT SERVICE

Reference and instruction data were analyzed to compare trends from 2010, after the formal launch of the PICS model, to the previous year's data (January 1 through November 30). A summary of the analysis of reference transactions is found in Table 2. Most significantly, the number of specialized reference transactions by librarians lasting more than 30 minutes increased substantially (240 in 2010 versus 134 in 2009), as did the total number of specialist reference transactions answered by librarians of any length (503 versus 383). Librarians answered 85% of all specialist questions, which is comparable to the 87% they answered the previous year. Data showed that staff were answering more basic reference questions compared to 1 year prior and continued to answer the majority of all basic reference questions (70% in 2009, 76% in 2010), while librarians answered slightly fewer basic reference questions than the prior year. Overall, these findings revealed no dramatic shift in who was answering complex reference questions, and the number of overall reference transactions answered by librarians or staff actually increased after the launch of the new model. This suggested the new model did not harm the provision of reference services. The significant increase in the number of librarian reference consultations lasting more than 30 minutes suggests that the new model is affecting meaningful use of librarian expertise. Close examination of reference statistics did lead to some questions about consistency in recording reference transactions by staff and librarians. A review of

**Table 2**
Analysis of reference transaction statistics, January through November, 2009, versus 2010

| Length of transaction | No. of basic reference transactions | | | | No. of specialist reference transactions | | | |
|---|---|---|---|---|---|---|---|---|
| | Staff | | Librarians | | Staff | | Librarians | |
| | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 |
| <5 minutes | 201 | 280 | 67 | 68 | 4 | 6 | 25 | 6 |
| 6–15 minutes | 152 | 128 | 62 | 62 | 14 | 37 | 144 | 119 |
| 16–30 minutes | 11 | 26 | 16 | 9 | 18 | 24 | 80 | 138 |
| >30 minutes | 2 | 1 | 8 | 2 | 20 | 22 | 134 | 240 |
| Total | 368* | 435 | 155† | 141 | 56‡ | 89‡ | 383 | 503 |

* Includes 2 transactions coded "Staff" with no time spent code.
† Includes 2 transactions coded "Librarian" with no time spent code.
‡ Staff do not typically answer specialist questions but may if their experience and level of training allow them to do so under extenuating circumstances (e.g., evenings, weekends).

procedures was subsequently addressed in department meetings in late summer 2010. Though librarians and staff now use a coding scheme to note the general nature of questions, evaluation of these data has not been completed.

Statistics for course-related instructional (CRI) sessions and classes or workshops requested outside of courses were analyzed for the same time periods. This analysis showed little variance in the number of courses taught or workshops offered from one year to the next. However, though the quantity of courses and workshops was relatively steady, the number of students attending CRI sessions did dramatically increase (763 in 2009 versus 1,603 in 2010). This increase can be attributed to several new instructional initiatives that began since the launch of PICS. The primary factor in the increase in student attendance is believed to be a result of new librarian involvement in third-year medical students' student morning report. This began in December 2009 and is ongoing. Additionally, a clinical librarian pilot was conducted, which led to additional instructional and committee service opportunities. Committee membership increased with participation in curriculum redesign committees for the college of medicine and a committee related to critical thinking and evidence-based practice for the department of internal medicine and the OSU Medical Center. Instruction related to evidence-based medicine and information seeking was also offered in the department of internal medicine. It is not clear whether these are the result of the new model or other factors, such as cultural shifts in health sciences education. Other new instructional efforts that do seem clearly connected to the formal liaison model include instruction to doctorate of nursing practice students, office hours in the college of nursing (CON), a research colloquium presentation for the CON, information literacy or evidence-based practice instruction, and inclusion in a global education partnership in the college of public health. Other previously taught recurring instructional sessions have been successfully transitioned to the appropriate liaisons. Though few in number and scale, these new initiatives are creating meaningful inclusion of librarians where they had not been before. Because liaison relationships take time to develop, this is an area that warrants further evaluation.

## DISCUSSION

The future direction of this model is a progression toward a more intensive liaison system, perhaps that of informationists or embedded librarians. However, the economy, no increases in librarian staffing, and organizational planning priorities currently create significant barriers. PHSL's organization includes many technical units not traditionally associated with libraries, and this organizational complexity impacts the overall direction of PHSL. Current organization-wide strategic planning includes reviewing, refining, and evaluating current models of service and includes surveying the customer base to assess information needs. These activities have the potential to change the overall service focus, including reference and liaison services. Librarians and ASK desk staff are currently exploring the possibility of ASK desk staff assisting liaisons with creating online subject guides and engaging in other activities to give the staff important experience and to assist liaisons with substantial non-liaison duties. Another issue affecting the future of PICS is ongoing construction at the library. Though this will ultimately not be library space, it still impacts the environment of the library and could impact the number of customers who actually enter the building. Though construction is generally thought of as negative, it has created opportunities to explore providing services in the colleges themselves or on the floors of the medical center. As more nonlibrary units are located within the library proper, demands on ASK desk staff could change the way they provide frontline assistance.

Evaluation of internal qualitative and quantitative data related to the PICS model has emphasized the need to provide a structure for liaisons. Though liaisons have been given leeway to proactively market services, it became clear that not all librarians have the time or proclivity to create and disseminate customized outreach to their colleges. The ERSC has created a plan for the coming year that provides very specific achievable steps for all liaisons and aims to create standardized teaching and promotional materials that all liaisons can use, as well as ASK desk staff. The liaison portion of the model will be evaluated after these initiatives have been accomplished. Customer feedback is another area needing future attention.

## CONCLUSION

Eliminating traditional reference desk services requires careful analysis and planning, as well as adequate and ongoing training of desk staff on the frontlines of service. It can free up time for librarians to explore collaborations and partnerships. Initial data indicate the new service model is resulting in more in-depth, lengthy consultations, thus utilizing librarians' strengths and expertise. The elimination of walk-in specialized reference assistance has not negatively impacted overall reference transaction statistics, with some reference and instructional statistics actually improving. Although implementing a proactive liaison program with librarians who have substantial non-liaison duties has been challenging, eliminating traditional walk-in reference hours has gone smoothly. PHSL does not expect to return to the traditional reference desk service model, even if the liaison model should change significantly in the future due to organizational priorities or increasing demands on librarians' time for activities that go above and beyond liaison expectations. As Arndt says, ''one size does not fit all'' for reference services [10]. Each institution must balance its organizational needs with that of its customers when designing its future services.

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